PowerFlow Change Log

Changes made since: May 2015

Date recorded: Dec. 19th, 2015

PowerFlow Library Updates

* Images added for several components
  + Coldplate
  + Gear box
  + Plate heat exchanger
  + Air cycle machine
  + AC bus
  + DC bus
* Updated block descriptions
  + Many blocks have been updated so that the description explains the inputs/outputs to the block as well as units
  + The following blocks have updated descriptions
    - ECS/Air-air heat exchanger
    - ECS/Turbine
    - ECS/Compressor
    - ECS/Air cycle machine
    - ECS/Passenger cabin
    - FOS/Pump
    - FOS/Fluid tank
    - Electrical/Battery
    - Electrical/Inverter
    - Electrical/Transformer
    - Electrical/Rectifier
    - Electrical/Generator
    - Hydraulic/Bypass valve
  + Many blocks have now been tied to html help files
    - Standard format developed for help files in html
    - PowerFlow blocks will now point to these help files if a user hits the ‘help’ button on the mask of the block
      * In the future, the help documentation will no longer be external to the PowerFlow toolset (i.e. the current Word document will become obsolete) and all information about how the toolset was created and is operated will be in an html format integrated to MATLAB/Simulink
  + The following blocks currently have html help files that have been developed from the current Word-based user manual
    - Electrical/Battery
    - Electrical/Generator
    - Electrical/Inverter
    - Electrical/Exciter
    - Electrical/Transformer
    - Electrical/AC Loads
    - ECS/Air-air heat exchanger
    - ECS/Passenger cabin
    - ECS/Mixing junction

Mission Profile Updates

* Walkthrough Mode Added
  + GUI now opens with option for user to choose Walkthrough or Express
  + Several new interfaces adapted to the Walkthrough mode
    - Build Mission Option Interface
  + Allows user to select what type of mission they would like to build
    - Mission Leg Interface
  + Users selects the mission legs
    - Define Parameter Interface
  + User defines the parameters for each mission leg
    - Physical Input interface
  + Physical values for aircraft
    - Analyze Interface
  + Allows user to do all analyzation previously added to the Mission Profile GUI
  + Several help messages added to guide new users along the way
* Physical Inputs
  + Inputs option added in Main GUI interface
  + Physical Inputs interface added into the walkthrough mode
  + Not currently in use in simulation but should be used in future version